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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/668,851

09/23/2003

David C. Chu

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02/07/2005

AGILENT TECHNOLOGIES, INC.

Legal Department, DL429

Intellectual Property Administration

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EXAMINER

NGUYEN, KHAI M

ART UNIT

PAPER NUMBER

2819

DATE MAILED: 02/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/668,851	Applicant(s) CHU ET AL.	
	Examiner Khai M. Nguyen	Art Unit 2819	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12-27-2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 and 12-39 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 32-39 is/are allowed.
- 6) ☒ Claim(s) 1 and 15-23 is/are rejected.
- 7) ☒ Claim(s) 2-10, 12-14 and 24-29 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 December 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Remarks/Amendments*

1. The allowability of claims 1-10, and 12-22 is withdrawn for the reason below (see items 2 and 3 of this office action).

### *Claim Rejections - 35 USC § 112*

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 1 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The subject matter ("**...block regression technique, wherein linear regression progressing is applied to selected sums of the digital signal waveform samples.**") of the amended claim is not described in the specification and not clear to the examiner or reader. Clarification or deletion of the claims is required.

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 15-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Clark et al. (US 3,956,623) (or Clark).

Regarding claims 15 & 21, Clark discloses a system, comprising: a first analog-to-digital converter (15) for generating, at a predetermined frequency, a first plurality of segments of digital signal waveform samples (A0) based on an incoming first signal [A(t)]; a second analog-to-digital converter (16) for generating, at a predetermined frequency, a second plurality of segments of digital signal waveform samples (B0) based on an incoming second signal [B(t)]; a digital phase accumulator (208 – Fig. 5); and a digital signal processor (130 of Fig. 3, see line 13-15 of column 8) coupled to the first and second analog-to-digital converters (see Figs. 2-3) and the digital phase accumulator (208 of Fig. 5 which is included in the central processor 130) for digitally processing each first and second segments of the digital signal waveform samples (A0 and B0) together with an output of the phase accumulator (on the bus 201 – Fig. 5) and for continually generating digital phase data (129 – Fig. 3), the digital signal processor configured to provide increment values ('The bit-by-bit addition...' of column 12, lines 2-9) to the digital phase accumulator (208) based on the digital phase data, thereby causing the output of the digital phase accumulator to represent an instantaneous phase of the incoming first signal.

Regarding claims 16-19, Clark discloses the digital phase data of claim 15 including: a phase correction value (column 9, line 30+); a frequency update value (Fig.

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6 – 226); and a magnitude estimate of the incoming first and second signals (column 9, line 61+ to column 10, line 24).

Regarding claim 20, Clark discloses each first and second segment of digital signal waveform samples includes a number of digital signal waveform samples equaling an integer power of 2 (column 4, line 30+).

Regarding claims 22-23, Clark discloses the first incoming signal is an inphase signal and the second incoming signal is a quadrature signal (Figs. 2-3, element 11-12).

#### ***Allowable Subject Matter***

5. Claims 32-39 are allowed.
6. Claims 2-10, 12-14, and 24-29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Contact Information***

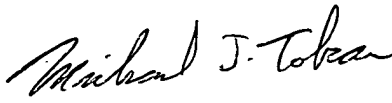
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khai M. Nguyen whose telephone number is 571-272-1809. The examiner can normally be reached on 8:00 to 4:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael J. Tokar can be reached on 571-272-1812. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KN  
February 1, 2005

  
**Michael Tokar**  
Supervisory Patent Examiner  
Technology Center 2800